FACT SHEET

as required by LAC 33:IX.2411, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0120154; AI 122025; PER20040001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Southeastern Louisiana Water & Sewer Company, LLC (SELA)
Castine Regional Sewage Treatment Plant
350 North Causeway Boulevard
Mandeville, LA 70448

II. **PREPARED BY:** Todd Franklin

DATE PREPARED: January 31, 2006

III. **PERMIT ACTION:** Issue LPDES permit LA0120154, AI 122025

LPDES application received: November 17, 2004

EPA has not retained enforcement authority.

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a privately owned treatment works serving residential subdivisions and light commercial businesses. This facility will replace two of SELA's existing facilities, the Quail Creek Oxidation Pond (LA0097551, AI 43278) and the Forest Brook Package STP (LAG570248, AI 97283). The outfall currently used by the Quail Creek Oxidation Pond shall be utilized as the outfall for the Castine Sewage Treatment Plant.

B. The permit application does not indicate the receipt of industrial wastewater.

C. The facility is located at the end of Lapin Street in Mandeville, St. Tammany Parish.

D. The treatment facility consists of an equalization basin/surge tank, two 0.5 MGD capacity aeration and clarifier chambers, tertiary sand filter, chlorine contact unit, and parshall flume for measurement.

E. Outfall 001

Discharge Location:	Latitude 30° 22′ 9″ North Longitude 90° 1′ 1″ West
Description:	treated sanitary wastewater
Design Capacity:	1 MGD

Type of Flow Measurement which the facility is currently using:

Continuous Recorder with 90' V-Notch Weir Staff Gauge

V. RECEIVING WATERS:

The discharge from the proposed treatment facility will be made directly into Bayou Castine, thence into Lake Pontchartrain. Bayou Castine is physically located within subsegment 040904 of the Pontchartrain Basin, defined at LAC 33:IX.1123. Table 3 as *Bayou Cane – U.S. Hwy. 190 to Lake Pontchartrain.* Bayou Castine however does not flow into Bayou Cane rather directly into Lake Pontchartrain. Therefore, for purposes of issuing this permit, subsegment 041001, defined at LAC 33:IX.1123 as *Lake Pontchartrain – West of the Hwy. 11 Bridge*, will be used in the development of effluent limitations and requirements. Subsegment 041001 is listed on the 303(d) list of impaired waterbodies.

The **critical low flow** (7Q10) of the Bayou Castine; thence into Lake Pontchartrain is 0.1 cfs.

The **hardness value** is 516.03 mg/l and the **fifteenth percentile value for TSS** is 6.17 mg/l.

The designated uses and degree of support for Segment 041001 of the Lake Pontchartrain Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment	Degree of Support of Each Use						
Partial	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Full	Full	N/A	N/A	N/A	N/A

[1/]The designated uses and degree of support for Segment 041001 of the Lake Pontchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 1998 Water Quality Management Plan, Volume 5, Part B, Water Quality Inventory, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 041001 of the Lake Pontchartrain Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Gulf Sturgeon, which is listed as a threatened/endangered species. The draft permit has been sent to the FWS for review. As set forth in the Memorandum of Understanding between the LDEQ and the FWS, the FWS will determine whether or not the issuance of the LPDES permit will likely have an adverse affect upon the Pallid Sturgeon.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mr. Todd Franklin
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 041001, Lake Pontchartrain-West of Hwy. 11 Bridge, is listed on LDEQ's Final 2004 303(d) List as impaired for pathogen indicators and copper (EPA-Category 5). To date no TMDLs have been completed for this waterbody. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL. Until completion of TMDLs for the Lake Pontchartrain Basin, those suspected causes for impairment which are not directly attributed to the sanitary wastewater point source category have been eliminated in the formulation of effluent limitations and other requirements of this permit. Additionally, suspected causes of impairment which could be attributed to pollutants which were not determined to be discharged at a level which would cause, have the reasonable potential to cause or contribute to an excursion above any present state water quality standard were also eliminated.

Pathogen Indicators

To protect against the development of pathogenic organisms in the receiving waterbodies, fecal coliform limits have been established in this permit.

Copper

To assess the potential discharge of Copper into the receiving waterbody, the application and effluent analysis submitted with the application were reviewed. No levels of copper were reported in the effluent at a detection level of 0.01 mg/l. Although, the permit application for the future Castine Regional Sewage Treatment Plant (STP) utilized effluent data from the existing Quail Creek discharge for tabulation of influent and historic effluent characteristics, it is anticipated the advanced treatment capabilities of the new STP will be equivalent to or better than the current treatment processes in place. Based on this evaluation, we believe the potential for the discharge of Copper from the facility at levels which will cause or contribute to Copper loadings in Lake Pontchartrain is unlikely. However, reporting requirements are being required to allow for the collection of data previously unavailable for the Castine Regional STP in order to make future permitting decisions and to assist in TMDL decisions for this subsegment.

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	83.4	10 mg/l	15 mg/l	Limits are set in accordance with the Areawide Policy for St. Tammany Parish
TSS	125.1	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen	33.4	4 mg/l	8 mg/l	Best Professional Judgement for Major facilities requiring an Ammonia-Nitrogen limitation

Priority Pollutants

Effluent Characteristics	Monthly Avg. (lbs./day)	Daily Maximum (lbs./day)	Basis
Total Copper	Report	Report	Reporting requirements are being required to allow for the collection of data previously unavailable in order to make future permitting decisions and to assist in TMDL decisions for this subsegment.

*If any individual analytical test result is less than the minimum quantification level listed below, a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) mass calculations and reporting requirements for the pollutants listed below:

Pollutant	MQL
Total Copper	10 µg/L

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) **pH**

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.2645.C.).

3) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

Toxicity Characteristics

In accordance with EPA's Region 6 Post-Third Round Toxics Strategy, permits issued to treatment works treating domestic wastewater with a flow (design or expected) greater than or equal to 1 MGD shall require biomonitoring at some frequency for the life of the permit or where available data show reasonable potential to cause lethality, the permit shall require a whole effluent toxicity (WET) limit (*Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, September 27, 2001 VERSION 4).

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC 33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testings performed in accordance with the LPDES Permit No. LA0120154, **Biomonitoring Section** for the organisms indicated below.

TOXICITY TESTS	FREQUENCY
Chronic static renewal 7-day survival & reproduction test using Ceriodaphnia dubia (Method 1002.0)	1/quarter
Chronic static renewal 7-day survival & growth test using fathead minnow (Pimephales promelas) (Method 1000.0)	1/quarter

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional concentrations shall be 30%, 40%, 53%, 70%, and 94%. The low-flow effluent concentration (critical low-flow dilution) is defined as 94% effluent. The critical dilution is calculated in Appendix B-1 of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in the **Biomonitoring Section** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in the **Biomonitoring Section** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2383. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act

X. PREVIOUS PERMITS:

There are no previous permits for the Castine Sewage Treatment Plant. However, this facility will replace two facilities which are currently covered by an LPDES permit. The Quail Creek Oxidation Pond is under LPDES Permit Number LA0097551 and the Forest Brook Package STP is under LPDES Permit Number LAG570248.

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates that no inspections have been performed for this facility.

B) Compliance and/or Administrative Orders

A review of the files indicates that no enforcement actions have been administered against this facility.

C) DMR Review

There are no DMRs on file for this facility

XII. ADDITIONAL INFORMATION:

Please be aware that the Department will be conducting a TMDL in the Lake Pontchartrain Basin scheduled for completion in 2011. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 1 MGD.

Effluent loadings are calculated using the following example:

$CBOD_5$: 8.34 gal/lb x 1 MGD x 10 mg/l = 83.4 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 1.00 and 5.00 MGD.

Effluent Characteristics	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow	Continuous	Recorder
$CBOD_5$	2/week	6 Hr. Composite
Total Suspended Solids	2/week	6 Hr. Composite
Ammonia-Nitrogen	2/week	6 Hr. Composite
Fecal Coliform Bacteria	2/week	Grab
Biomonitoring		
Ceriodaphnia dubia (Method 1002.0)	1/quarter	24 Hr. Composite
Pimephales promelas (Method 1000.0)	1/quarter	24 Hr. Composite
pH	2/week	Grab
Total Copper	1/year	24 Hr. Composite

Environmental Impact Questionnaire:

Applicant Comments/Responses (verbatim from applicant)

1. Have the potential and real adverse effects of the proposed facility been avoided to the maximum extent possible?

   Yes, the STP is a mechanical plant of proven design and will be operated by state certified operators.

2. Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?

   Yes, the impact costs have been minimized by the facility design and this firm's operational strategy.

3. Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing nonenvironmental benefits?

   No alternate choices are currently available. However, St. Tammany Parish regionalization plans should eliminate and/or grow out this plant in the future.

4. Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing nonenvironmental benefits?

   No, the project design is such that no alternate site offers more protection.

5. Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing nonenvironmental benefits?

   No, the extended aeration method of treatment is well proven for this type of application.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process , Vol. 5, "Water Quality Inventory Section 305(b) Report", Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards", Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program", Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Southeastern Louisiana Water & Sewer Company, LLC, Castine Regional Sewage Treatment Plant, March 30, 2004.